

PLUMBING ABBREVIATIONS	
SYMBOL	DESCRIPTION
AFF	- ABOVE FINISH FLOOR
CD	- CONDENSATE DRAIN
CFH	- CUBIC FEET PER HOUR
CO	- CLEANOUT
CW	- DOMESTIC COLD WATER
CWVO	- DOMESTIC COLD WATER VALVED OUTLET
(D)	- WORK TO BE DEMO'D
DN	- DOWN
DWG	- DRAWING
EXIST	- EXISTING
(E)	- EXISTING
°F	- DEGREE FAHRENHEIT
FCO	- FLOOR CLEANOUT
G	- GAS
GPH	- GALLONS PER HOUR
GPM	- GALLONS PER MINUTE
HW	- DOMESTIC HOT WATER
HWR	- DOMESTIC HOT WATER RECIRCULATING
IE	- INVERT ELEVATION
IW	- INDIRECT WASTE
KW	- KILOWATT
LBS	- POUNDS
(N)	- NEW WORK
NC	- NORMALLY CLOSED
NIC	- NOT IN CONTRACT
NO	- NORMALLY OPEN
NTS	- NOT TO SCALE
OD	- OUTSIDE DIAMETER
PRV	- PRESSURE REDUCING VALVE
PSI	- POUNDS PER SQUARE INCH
PVC	- POLYVINYL CHLORIDE PIPE
RD	- ROOF DRAIN
RPBP	- REDUCED PRESSURE BACKFLOW PREVENTOR
SAN	- SANITARY
SD	- STORM DRAIN
SF	- SQUARE FEET
SH	- SHEET
ST	- STORM
STO	- OVERFLOW STORM DRAIN
V	- VENT
VTR	- VENT THRU ROOF
WCO	- WALL CLEANOUT
WHY	- WALL HYDRANT
WTR	- WATER

PLUMBING SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	- PIPING TO BE DEMO'D
	- DOMESTIC COLD WATER
	- DOMESTIC HOT WATER
	- DOMESTIC HOT WATER RECIRCULATING
	- GAS
	- SHUTOFF VALVE
	- BALL VALVE
	- CALIBRATED BALANCING VALVE
	- CHECK VALVE (SWING)
	- PRESSURE REDUCING VALVE
	- SOLENOID OPERATED VALVE
	- REDUCED PRESSURE BACKFLOW PREVENTER
	- RELIEF OR SAFETY VALVE
	- GAS COCK
	- GAS PRESSURE REGULATOR
	- SHUTOFF VALVE ON RISER
	- GAS COCK ON RISER
	- CONNECTION, TOP
	- CONNECTION, BOTTOM
	- ELBOW, TURNED DOWN
	- ELBOW, TURNED UP
	- TEE, TURNED UP
	- TEE, TURNED DOWN
	- CAP
	- DIRECTION OF FLOW
	- REVISION REFERENCE
	- DETAIL REFERENCE: TOP-DETAIL# BOTTOM-DRAWING# SHOWN ON

THERMOSTATIC MIXING VALVE

MARK	TMV-1
OUTLET TEMPERATURE	105°F
INLET/OUT SIZE	1.25" / 1.5"
MANUFACTURER	BRADLEY
MODEL NUMBER	HL-130
MIN FLOW RATE	4 GPM
DESIGN FLOW RATE	80 GPM
LOCATION	MECHANICAL ROOM

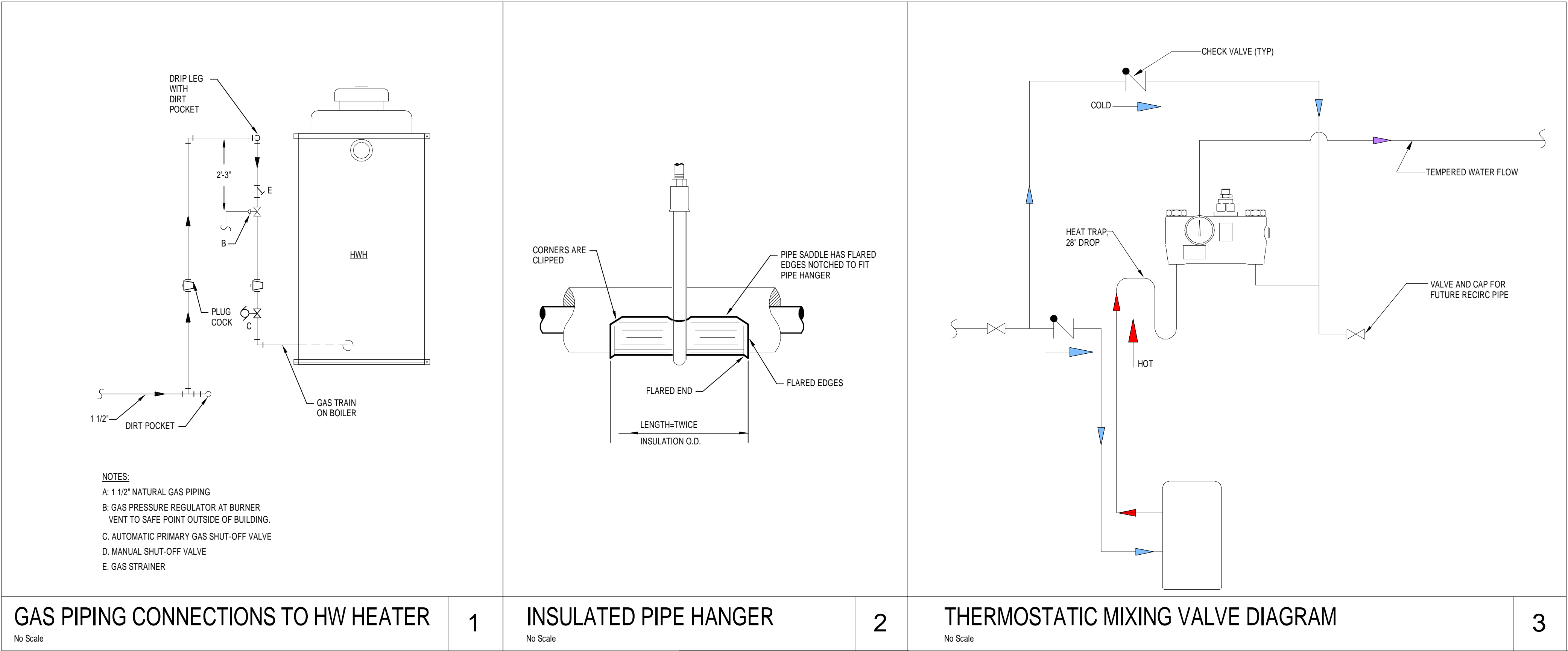
GENERAL NOTES

- REFERENCE THE SPECIFICATIONS FOR MATERIAL AND EQUIPMENT INSTALLATION STANDARDS.
- THE PLUMBING INSTALLATION SHALL COMPLY WITH ALL STATE AND LOCAL CODES.
- UTILITIES AND SERVICES INDICATED ARE TAKEN FROM VARIOUS OLD AND NEW SURVEYS, AS-BUILT RECORDS AND FIELD INVESTIGATIONS. UNFORSEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON DRAWINGS. COOPERATION WITH OTHER TRADES IN ROUTING AND BURIAL DEPTHS, AS DETERMINED DURING CONSTRUCTION, WILL BE NECESSARY.
- FIELD VERIFY EXISTING INSTALLATIONS, MODIFY EXISTING PLUMBING SYSTEMS, WHICH ARE TO REMAIN ACTIVE, TO FACILITATE RECONNECTION AND EXTENSION OF THE NEW WORK.
- NOTIFY OWNER AT LEAST 1 WEEK PRIOR TO INTERRUPTING EXISTING SERVICE. SCHEDULE DISCONNECTION AND TIE-INS TO MINIMIZE DISRUPTION OF SERVICES. SERVICES ARE NOT TO BE LEFT DISRUPTED DURING NON-NORMAL CONTRACTOR WORKING HOURS.
- PIPE ROUTING SHOWN IS SCHEMATIC AND IS NOT INTENDED TO INDICATE EXACT ROUTING. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL OFFSETS AND FITTINGS REQUIRED FOR PROPER INSTALLATION AND TO MAINTAIN CLEARANCES. VERIFY STRUCTURAL, MECHANICAL AND ELECTRICAL INSTALLATIONS AND OTHER POTENTIAL OBSTRUCTIONS AND ROUTE PIPING TO AVOID INTERFERENCES.
- PROVIDE ALL OFFSETS AND FITTINGS AND MAKE CONNECTION TO SITE UTILITIES.
- FLASH AND COUNTER-FLASH ROOF PENETRATIONS.
- COORDINATE PIPING WITH ALL ELECTRICAL EQUIPMENT (PANELS, TRANSFORMERS, ETC.) PRIOR TO ANY INSTALLATION. DO NOT ROUTE ANY PIPING OVER ANY ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES. ANY PIPING RUN OVER PANELS SHALL BE RE-ROUTED AT NO ADDITIONAL COST.

GAS WATER HEATER SCHEDULE

MARK	HWH-1	HWH-2	HWH-3
GAS TYPE	NATURAL	NATURAL	NATURAL
INPUT(BTU)	499,900	499,900	499,900
RECOVERY (GPH) @70°F	300	300	300
STORAGE(GALLONS)	119	119	119
STORAGE TEMP(°F)	140°	140°	140°
MOTOR(VOLTS/PHASE/HERTZ)	120/1/60	120/1/60	120/1/60
SIZE(D"xH")	33"x75"	33"x75"	33"x75"
FLUE SIZE	4"	4"	4"
OPERATING WEIGHT(LBS)	1866	1866	1866
MANUFACTURER	A.O. SMITH	A.O. SMITH	A.O. SMITH
MODEL NUMBER	BTH-500	BTH-500	BTH-500

NOTES:
PROVIDE T&P VALVE AT FRONT CONNECTION.



No.	Date	Description
	04/10/14	ISSUED FOR PRICING

Seal

Project No.:	513151
Issue Date:	04-10-14
Drawn By:	GJ
Approved By:	JM
Scale:	12" = 1'-0"

Drawing Title:
**MECHANICAL
LEGENDS, NOTES,
SCHEDULES AND
DETAILS**

Drawing No.:

M-1

A. GENERAL NOTES

- DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL OTHER SPECIFICATION SECTIONS, APPLY TO ALL SECTIONS OF DIVISION 15000.
- THE CONTRACTOR FOR THIS DIVISION OF WORK IS REQUIRED TO READ THE SPECIFICATIONS AND REVIEW THE DRAWINGS FOR ALL DIVISIONS OF WORK PRIOR TO BEGINNING WORK AND IS RESPONSIBLE FOR THE COORDINATION OF HIS/HER WORK AND THE WORK OF HIS/HER SUBCONTRACTORS WITH ALL DIVISIONS OF WORK TO AVOID INTERFERENCE AND CONFLICTS. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO PROVIDE HIS/HER SUBCONTRACTORS WITH COMPLETE SETS OF BID DOCUMENTS.
- THIS CONTRACTOR IS RESPONSIBLE FOR SCHEDULING THE COMPLETION AND INSPECTION OF HIS/HER WORK AND THE WORK OF HIS/HER SUBCONTRACTORS TO COMPLY WITH THE SCHEDULE.
- THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTAL OF BID TO DETERMINE CONDITIONS AFFECTING THE WORK. ANY ITEMS WHICH ARE NOT COVERED IN THE BID DOCUMENTS OR ANY PROPOSED SUBSTITUTIONS SHALL BE LISTED SEPARATELY AND QUALIFIED IN THE CONTRACTORS BID. SUBMITTAL OF A BID SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS AND ANY MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS SHALL BE INCLUDED. FAILURE TO VISIT THE SITE DOES NOT RELIEVE THE CONTRACTOR OF HIS/HER RESPONSIBILITY IN PERFORMANCE OF WORK.

B. GENERAL REQUIREMENTS

- THIS CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION, AND FACILITIES NECESSARY TO PROVIDE A COMPLETE HVAC, PLUMBING, FIRE PROTECTION SYSTEM AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS AND AS REQUIRED BY JOB CONDITIONS. ALL WORK NECESSARY AND NOT SPECIFICALLY NOTED TO BE PROVIDED BY OTHERS SHALL BE PROVIDED BY THIS CONTRACTOR.
- ALL WORK SHALL BE PERFORMED IN A NEAT, PROFESSIONAL MANNER USING GOOD CONSTRUCTION PRACTICES.
- UNLESS SPECIFICALLY NOTED OTHERWISE, MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW, TESTED, LISTED AND LABELED BY AN INDEPENDENT LABORATORY AND SIZED IN CONFORMITY WITH REQUIREMENTS OF STATE AND LOCAL CODES, WHICHEVER IS MORE STRINGENT.
- ALL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING. THIS CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT SERVICE ACCESS TO ALL EQUIPMENT.
- FIELD MEASURE AND VERIFY REQUIREMENTS FOR EXACT DIMENSION'S, OFFSETS AND ADDITIONAL ELBOWS REQUIRED TO SUIT SITE CONDITIONS ARE CONSIDERED PART OF THE SCOPE.

C. CODES

- ALL WORK SHALL COMPLY WITH 2010 FLORIDA BUILDING CODE ORDINANCES AND OTHER STATE, COUNTY, CITY AND LOCAL CODES AND ORDINANCES. SAFETY AND HEALTH CODES, NFPA CODES, ENERGY CODES AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. THIS CONTRACTOR SHALL INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS. THIS CONTRACTOR SHALL INCLUDE IN THE BID ANY CHANGES REQUIRED BY CODES AND IF THESE CHANGES ARE NOT INCLUDED IN THE BID, THEY MUST BE QUALIFIED AS A SEPARATE LINE ITEM IN THE BID. AFTER CONTRACT IS ISSUED, NO ADDITIONAL COST DUE TO CODE ISSUES SHALL BE REIMBURSED TO THE CONTRACTOR.

D. LICENSES, PERMITS, INSPECTIONS & FEES

- THIS CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES, PERMITS, INSPECTIONS AND FEES REQUIRED OR RELATED TO DIVISION 15000 WORK.
- FURNISH TO THE (OWNER) ALL CERTIFICATES OF INSPECTION AND FINAL INSPECTION APPROVAL AT COMPLETION OF PROJECT.

E. GUARANTEE

- THIS CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORK PROVIDED UNDER HIS/HER CONTRACT AND SHALL MAKE GOOD, REPAIR OR REPLACE AT HIS/HER OWN EXPENSE, ANY DEFECTIVE WORK, MATERIAL OR EQUIPMENT DISCOVERED WITHIN A PERIOD OF 12 MONTHS FROM THE DATE OF ACCEPTANCE (IN WRITING) OF THE INSTALLATION. EXTENDED WARRANTIES ARE AS SPECIFIED WITH INDIVIDUAL EQUIPMENT.
- THE HOT WATER HEATERS SHALL BE FURNISHED WITH A 5 YEAR HEAT EXCHANGER WARRANTY.

F. PHASING REQUIREMENTS (IF APPLICABLE)

- THIS CONTRACTOR SHALL INCLUDE IN THE BID ALL NECESSARY SERVICE REQUIRED TO KEEP THE OPERATING PORTION OF THE BUILDING'S (HVAC, PLUMBING AND SPRINKLER) SERVICES IN OPERATION. CONTRACTOR MUST SCHEDULE IN WRITING ONE WEEK PRIOR TO ANY SHUT DOWN OF (THE HVAC, PLUMBING OR FIRE PROTECTION) SYSTEMS.

G. DEMOLITION (IF APPLICABLE)

- THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE DEMOLITION OF EXISTING WORK AND THE RENOVATION WORK. COORDINATE WITH THE OTHER CONTRACTORS ANY EXISTING EQUIPMENT REQUIRED TO BE LEFT INTACT.
- THIS CONTRACTOR SHALL INCLUDE AND WILL BE HELD RESPONSIBLE FOR, THE REMOVAL OF ALL EXISTING (FIRE PROTECTION SYSTEMS, PLUMBING FIXTURES, PIPING SYSTEMS, HVAC UNITS, REFRIGERANT RECAPTURE, EXHAUST FANS), AND ASSOCIATED ROOF CURBS OR RAILS NOT TO BE REUSED ON THIS PROJECT, UNLESS SPECIFICALLY NOTED OTHERWISE. CONTRACTOR SHALL VERIFY ALL PRESUMED ABANDONED (EQUIPMENT, PIPES, DUCTWORK AND EQUIPMENT) PRIOR TO REMOVAL. ROOF CURBS SHALL BE REMOVED AND THE ROOF PATCHED. ALL EXTRANEIOUS ITEMS IN THE SPACE, ASSOCIATED WITH THE SPACE, OR ON THE ROOF NOT APPLICABLE TO THE NEW WORK MUST BE REMOVED AND ROOF/WALL/FLOOR PATCHED/REPAIRED TO MATCH EXISTING SURROUNDINGS. EXISTING ABANDONED (PIPES, DUCTS OR EQUIPMENT) IN THE FLOOR, EMBEDDED IN CONCRETE, OR OTHERWISE INACCESSIBLE ARE TO BE CUT OFF AND SEALED BELOW OR WITHIN THE FLOOR OR WALL WHEN THEY ARE NOT TO BE REUSED IN THIS PROJECT. IF REQUIRED BY CODES, ABANDONED (PIPING AND/OR DUCTWORK) MUST BE REMOVED TO POINT OF ORIGIN. CONFIRM THE EXTENT OF DEMOLITION PRIOR TO BID AND INCLUDE IN BID PROPOSAL.

H. SLEEVES

- THIS CONTRACTOR SHALL PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH ITS RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2" ABOVE THE FLOOR. CONTRACTOR SHALL COORDINATE ANY CORE DRILLING OR CUTTING OF OPENINGS IN MASONRY FLOORS OR WALLS.
- ALL SLEEVES AND OPENINGS THROUGH FIRE-RATED WALLS AND/OR FLOORS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTV" FOAM, "3M" FIRE RATED SEALANTS OR EQUAL, SO AS TO RETAIN THEIR FIRE RATING.
- SLEEVES IN BEARING AND MASONRY WALLS, FLOORS, AND PARTITIONS SHALL BE STANDARD WEIGHT STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS, OR FOR CONCEALED VERTICAL PIPING, SLEEVES SHALL BE NO. 22 U.S.G. GALVANIZED STEEL MINIMUM.

I. HANGERS

- PROVIDE HANGERS AND SUPPORTS FOR ALL PIPING, DUCTWORK, AND EQUIPMENT IN ACCORDANCE WITH SMACNA, MSS,ASME, AND ASHRAE STANDARDS.
- HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS ANGLE IRON, BANDS, C-CLAMPS WITH RETAINING CLIPS, CHANNELS, HANGER RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK.
- HANGERS SHALL BE FASTENED TO BUILDING STEEL, CONCRETE OR MASONRY. HANGING FROM METAL DECK IS NOT PERMITTED. HANGERS MUST BE ATTACHED TO UPPER CHORDS OF BAR JOISTS. WHERE INTERFERENCES OCCUR, AND IN ORDER TO SUPPORT (DUCTWORK OR PIPING) THE CONTRACTOR SHALL INSTALL TRAPEZE TYPE HANGERS OR SUPPORTS WHICH SHALL BE LOCATED WHERE THEY DO NOT INTERFERE WITH ACCESS TO FIRE DAMPERS, VALVES, AND OTHER EQUIPMENT.
- HANGERS FOR ALL INSULATED PIPING SHALL BE SIZED AND INSTALLED FOR THE OUTER DIAMETER OF INSULATION. INSTALL 6" LONG SPLIT CIRCLE GALVANIZED SADDLE BETWEEN THE HANGER AND THE PIPE INSULATION. PROVIDE HIGH DENSITY INSULATION INSERT BETWEEN THE SADDLE AND THE PIPE.
- HANGERS AND PIPING OF DISSIMILAR METALS SHALL BE DI-ELECTRICALLY SEPARATED.

J. DIRT AND DUST CONTROL

- SCREEN OFF ALL AREAS WHERE CONSTRUCTION IS TO TAKE PLACE FROM THE AREAS TO REMAIN INHABITED. INHABITED AREAS SHALL REMAIN DUST AND DEBRIS FREE DURING CONSTRUCTION. CLEAN ANY AREAS OUTSIDE DESIGNATED CONSTRUCTION AREA WHICH MAY HAVE BECOME SOILED DUE TO CONSTRUCTION.

G. EQUIPMENT, PIPING AND INSTALLATION

- REFER TO PLANS FOR SCHEDULES OF EQUIPMENT AND FIXTURES. AMERICAN STANDARD, KOHLER AND CRANE ARE CONSIDERED ACCEPTABLE AS EQUALS.
- MAINTAIN A MINIMUM CLEARANCE OF 6" BETWEEN PLUMBING PIPING AND EQUIPMENT AND ALL FIRE/SMOKE RATED WALLS.
- INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. INSTALL UNITS LEVEL AND PLUMB, FIRMLY ANCHORED IN LOCATIONS INDICATED. MAINTAIN MANUFACTURER'S CLEARANCES. SUPPORT ALL EQUIPMENT AS REQUIRED TO PROVIDE A RIGID, VIBRATION FREE INSTALLATION.
- POTABLE WATER PIPING SHALL BE AS FOLLOWS:
A. BELOW GRADE: TYPE "K" ANNEALED TYPE TEMPERED COPPER TUBE FOR PIPE SIZES 2 INCHES AND SMALLER. BRAZE ALL JOINTS.
B. ALL OTHER: TYPE "L" DRAWN COPPER TUBE WITH WROUGHT COPPER FITTINGS AND 95-5 TIN-ANTIMONY SOLDER.
- PIPING OF DISSIMILAR METALS SHALL BE DI-ELECTRICALLY SEPARATED.
- FIELD VERIFY EXACT CONNECTION POINTS PRIOR TO SUBMITTING BID AND NOTIFY ENGINEER IF CONDITIONS ARE NOT AS SHOWN ON THE PLANS OR AS STATED IN THE SPECIFICATIONS. CONTRACTOR SHALL VERIFY THE OPERABILITY OF ENTIRE SYSTEM PRIOR TO TIE-IN AS FOLLOWS:
A. SNAKE SANITARY FOR A DISTANCE OF 100 FEET AND REPORT ANY BLOCKAGE.
B. TEST WATER PRESSURE TO INSURE MINIMUM PSI MATCHES MOST DEMANDING EQUIPMENT SUPPLIED.
- INSULATE ALL HOT AND COLD WATER PIPING WITH 1" THICK (K=0.23 @ 75°F) FIBERGLASS PIPE INSULATION WITH AN ALL SERVICE JACKET TO MEET LOCAL CODES AND UL FLAME SPREAD AND SMOKE DEVELOPED RATING. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- INSULATE THE TRAP, SANTARY AND SUPPLY PIPES UNDER LAVORATIES WITH TRUEBRO MODEL 102W "HANDI LAV GUARD" INSULATION KIT OR EQUAL.
- INSTALL ALL NECESSARY PIPE HANGERS, SADDLES, AND CARRIERS TO PROPERLY SUPPORT ALL PIPING AND FIXTURES. HANGERS SHALL SUIT TYPE OF PIPING PROVIDED AND BE SPACED AT A MAXIMUM SPAN OF 5 FEET.
- STERILIZE WATER SYSTEM IN ACCORDANCE WITH LOCAL CODES.
- TEST ENTIRE PLUMBING SYSTEM IN ACCORDANCE WITH 2004 FLORIDA PLUMBING CODE.
- PROVIDE WATER METER AND REMOTE READER PER LOCAL UTILITIES REQUIREMENT, IF APPLICABLE.
- CONDENSATE DRAIN: PROVIDE POLYVINYL CHLORINE (PVC) SCHEDULE 40 PLASTIC PIPE (TYPE (DWV) IN CONFORMANCE WITH STANDARD ASTM D2665.
- VALVES: PROVIDE BALL VALVE NIBCO SERIES 585-70 FOR SHUT-OFF
- PROVIDE ACCESS PANELS WHERE REQUIRED FOR OPERATION, MAINTENANCE AND BALANCING OR PLUMBING EQUIPMENT.
- PROVIDE WATER HAMMER ARRESTORS AT EACH BRANCH LINE.

H. GAS PIPING

- FURNISH AND INSTALL A COMPLETE GAS PIPING SYSTEM.
- GAS LINES SHALL BE BLACK STEEL, SCHEDULE 40, ASTM A-53, WITH MALLEABLE THREADED FITTINGS FOR 2" AND SMALLER, AND WITH WELDED JOINTS FOR 2-1/2" AND LARGER.
- FURNISH AND INSTALL A GAS COCK, DIRT LEG, AND UNION CONNECTION AT EACH PIECE OF EQUIPMENT.
- PITCH PIPING AT A UNIFORM GRADE OF 1/4" IN 15 FEET UPWARD IN DIRECTION OF FLOW. SUPPORT PIPING EVERY 5 FEET, AS DETAILED ON DRAWINGS, OR BY STANDARD INDUSTRY PRACTICE, WHICHEVER IS MORE STRINGENT.
- GAS PIPING EXPOSED ON ROOF SHALL BE PAINTED WITH RUST-INHIBITING PAINT.
- GAS PIPING INSTALLED IN RETURN AIR PLENUMS SHALL BE SLEEVED AND VENTED OR WELDED IN ACCORDANCE WITH THE LOCAL GAS COMPANY, LOCAL CODE AND APPLICABLE NFPA 54 CODES.
- TESTING AND PURGING OF GAS PIPING SHALL BE DONE PER THE REQUIREMENTS OF THE LOCAL GAS COMPANY, LOCAL CODES AND APPLICABLE NFPA CODES.
- CONTACT AND COORDINATE GAS SERVICE, METER AND REGULATOR REQUIREMENTS WITH THE LOCAL GAS COMPANY PRIOR TO BID. INCLUDE INSTALLATION COST OF GAS METER AND REGULATOR IN BID.

I. LABELS/PIPE MARKERS

- FURNISH AND INSTALL PIPE IDENTIFICATION MARKERS ON ALL PIPES INSTALLED UNDER THIS CONTRACT. MARKERS SHALL BE A MINIMUM OF 1-1/2" X 8" AND IDENTIFIED IN ACCORDANCE WITH THE BACKGROUND AND LETTER COLORS ISSUED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI). MARKERS SHALL BE MANUFACTURED BY CHAMPION AMERICA INC., BRADY, SETON, OR EQUAL.
- PIPING SHALL BE IDENTIFIED AS FOLLOWS: CONDENSATE, REFRIGERANT LIQUID, REFRIGERANT SUCTION, AND DIRECTIONAL ARROWS. ALL IDENTIFICATIONS MUST BE VISIBLE AT EQUIPMENT.

J. STEEL FRAMING FOR SUPPORT

- PROVIDE ALL NECESSARY STEEL FRAMING REQUIRED TO INSTALL ALL HVAC EQUIPMENT AS DESCRIBED OR IMPLIED ON THE DRAWINGS. ALL PENETRATIONS OF EXISTING STRUCTURE SHALL BE DONE AT THIS CONTRACTOR'S EXPENSE.

K. SYSTEM START-UP

- THIS CONTRACTOR SHALL INCLUDE AS A BASE, 2-HOURS OF START-UP TIME PLUS AN ADDITIONAL 2-HOURS OF START-UP TIME PER HVAC UNIT SHOWN ON DRAWINGS.

L. FINAL INSPECTIONS

- ASIDE FROM NORMAL INTERIM INSPECTIONS OF WORK IN PLACE, THE ENGINEER SHALL BE NOTIFIED (IN WRITING) TO INSPECT THE FINISHED INSTALLATION UPON COMPLETION FOR COMPLIANCE WITH THE PLANS, SPECIFICATIONS AND CODES. THE INSTALLING CONTRACTOR SHALL BE RESPONSIBLE TO BRING ALL ITEMS REPORTED BY THE ENGINEER INTO COMPLIANCE.

TLC

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LAKE COUNTY JAIL CENTRAL ENERGY
PLANT DOMESTIC WATER HEATING

416 WEST MAIN STREET
TAVARES, FL

No.	Date	Description
	04/10/14	ISSUED FOR PRICING

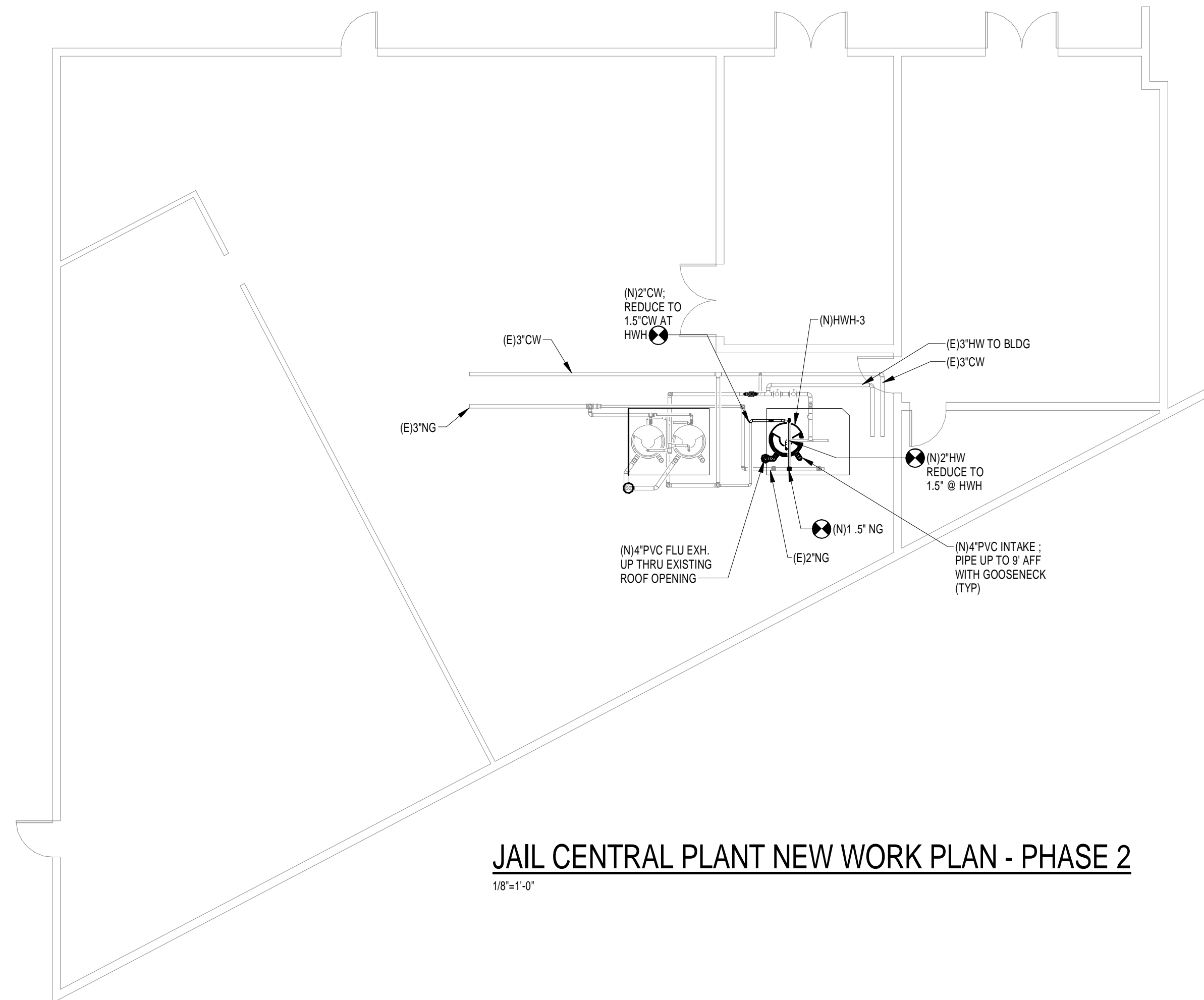
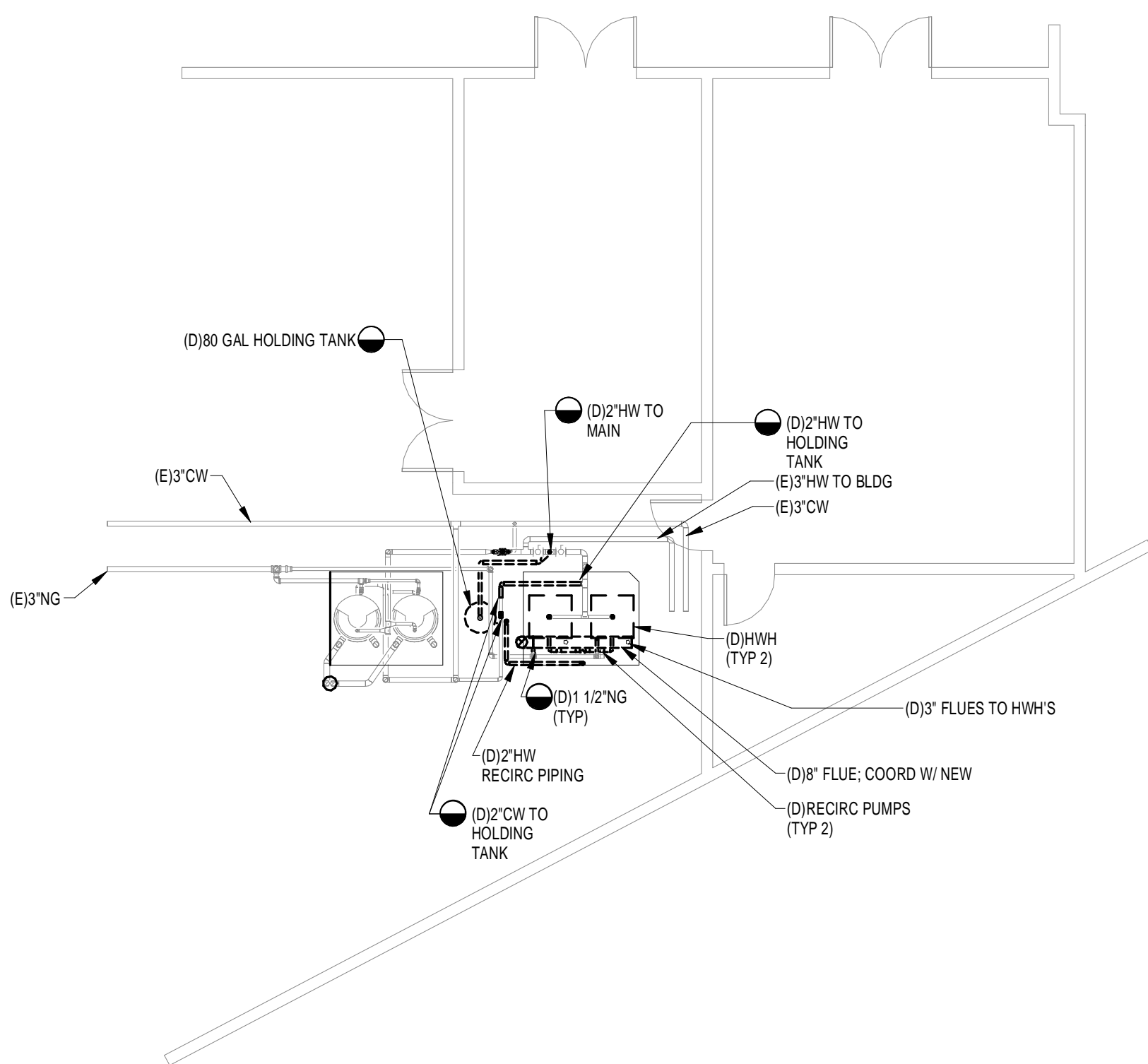
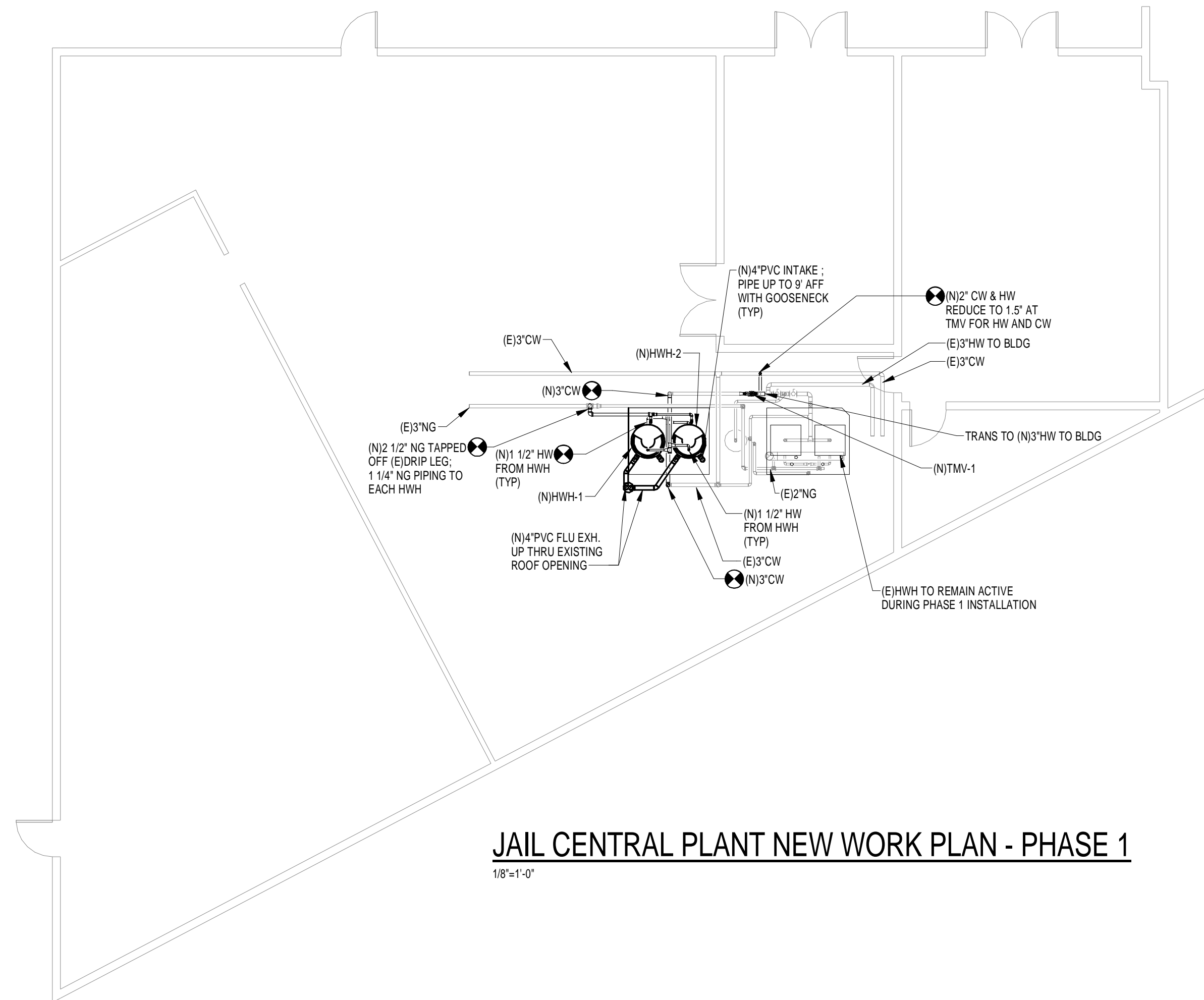
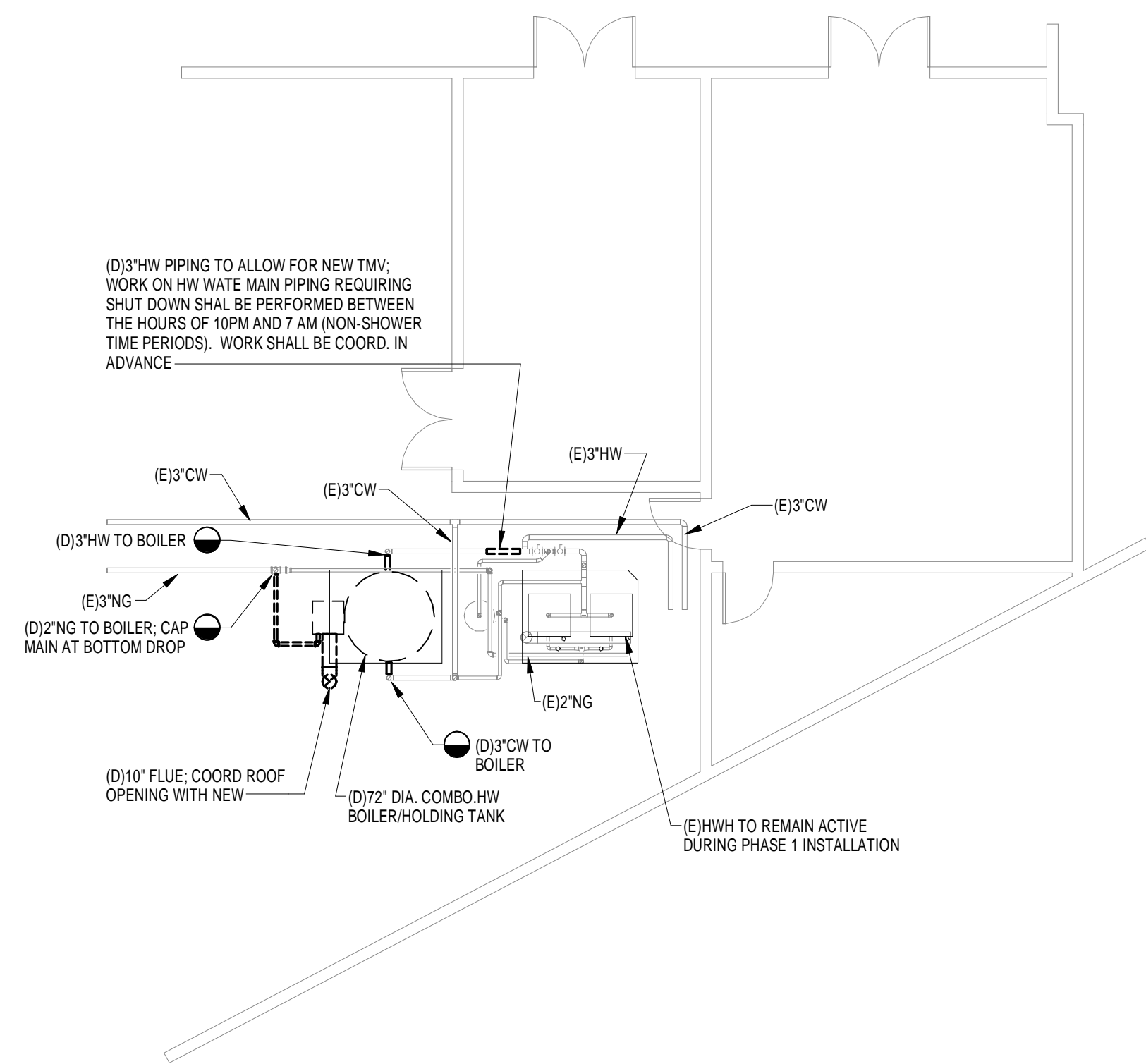
Seal

Project No.:	513151
Issue Date:	04-10-14
Drawn By:	GJ
Approved By:	JM
Scale:	12" = 1'-0"

Drawing Title:
MECHANICAL
SPECIFICATIONS

Drawing No.:

M-2



ENGINEERING

FOR ARCHITECTURE

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engineers.
Q.A. #15

COA #15
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LAKE COUNTY JAIL CENTRAL ENERGY
PLANT DOMESTIC WATER HEATING

416 WEST MAIN STREET
TAVARES, FL

[illegible]

Seal

Project No.:	513151
Issue Date:	04-10-14
Drawn By:	GJ
Approved By:	JM
Scale:	1/8" = 1'-0"

Drawing Title:

MECHANICAL
PLANS

Drawing No.:

M-3

Branch Panel: LE1

Location:

Supply From:

Mounting: Surface

Enclosure: Type 1

Volts: 120/208 Wye

Phases: 3

Wires: 4

A.I.C. Rating: 10,000

Mains Type: MCB

Mains Rating: 100 A

Notes:

Existing Panel

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	Existing	20 A	1	-	-	-	1	20 A	HW-1 (1)	2
3	Existing	20 A	1	-	-	-	1	20 A	HW-2 (1)	4
5	Existing	20 A	1	-	-	-	1	20 A	Existing	6
7	Existing	20 A	1	-	-	-	1	20 A	HW-3 (1)	8
9	Existing	20 A	1	-	-	-	--		Space	10
11	Spare	20 A	2	-	-	-	1	20 A	Existing	12
13				-	-	-	1	20 A	Existing	14
15	Existing	20 A	1	-	-	-	1	20 A	Existing	16
17	Existing	20 A	1	-	-	-	1	20 A	Existing	18
19	Existing	20 A	1	-	-	-	1	20 A	Existing	20
21	Existing	20 A	1	-	-	-	1	20 A	Existing	22
23	Existing	20 A	1	-	-	-	1	20 A	Existing	24
25	Existing	20 A	1	-	-	-	1	20 A	Existing	26
27	Existing	20 A	1	-	-	-	1	20 A	Existing	28
29	Existing	20 A	1	-	-	-	1	20 A	Existing	30

Notes:

1. REPLACE EXISTING 20A, 2-POLE SPARE CIRCUIT BREAKER WITH NEW CIRCUIT BREAKER SIZED AS INDICATED. MATCH EXISTING PANEL CHARACTERISTICS. UPDATE PANEL DIRECTORY.

[illegible]

Seal M. Moncef Hadiji, P.E.
Florida License #48022

Project No.:	513151
Issue Date:	04-10-14
Drawn By:	JNP
Approved By:	MMH
Scale:	12" = 1'-0"

Drawing Title:

ELECTRICAL NOTES, LEGEND, AND SPECIFICATIONS

Drawing No.:

E-1



ENGINEERING FOR ARCHITECTURE

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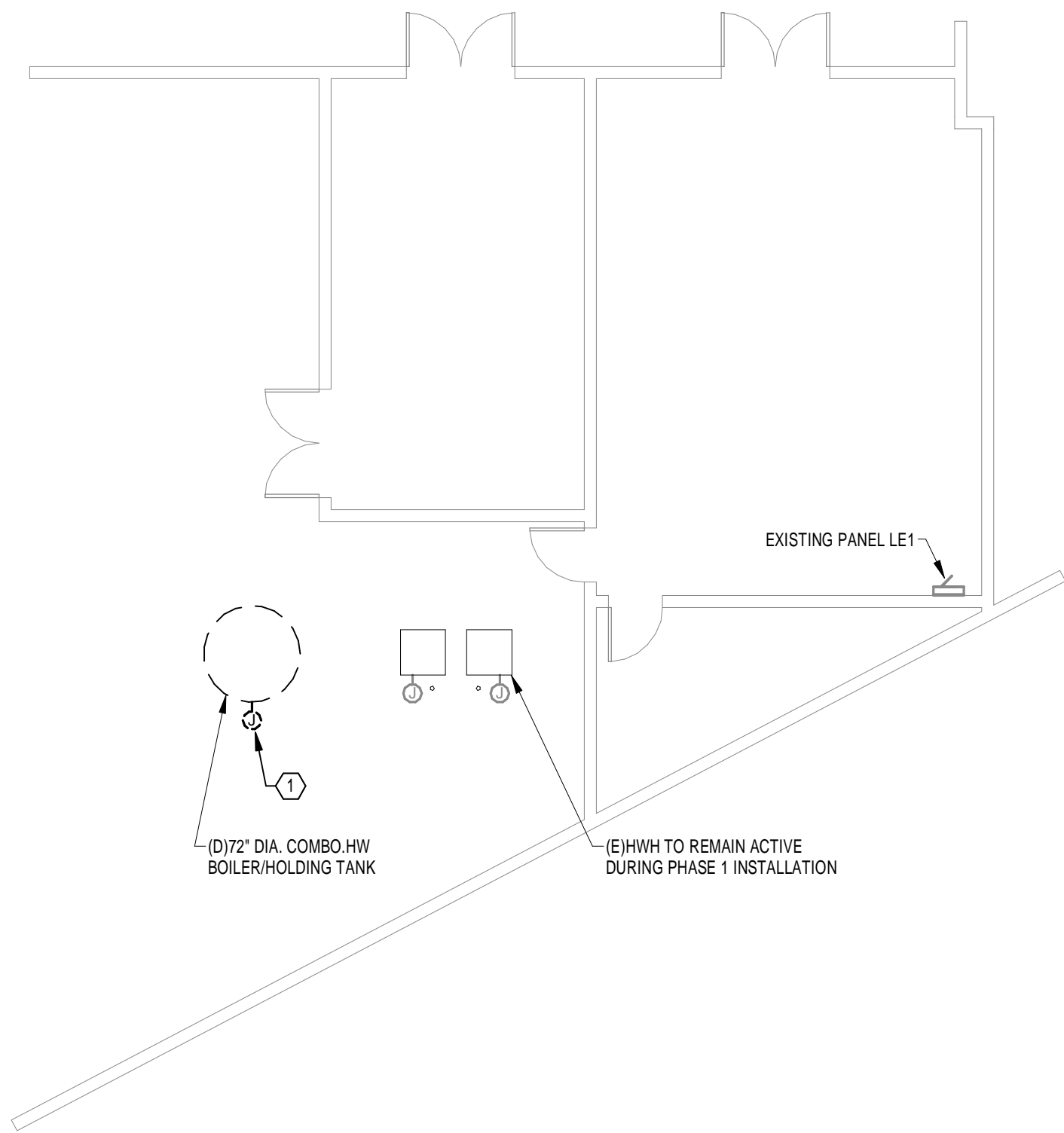
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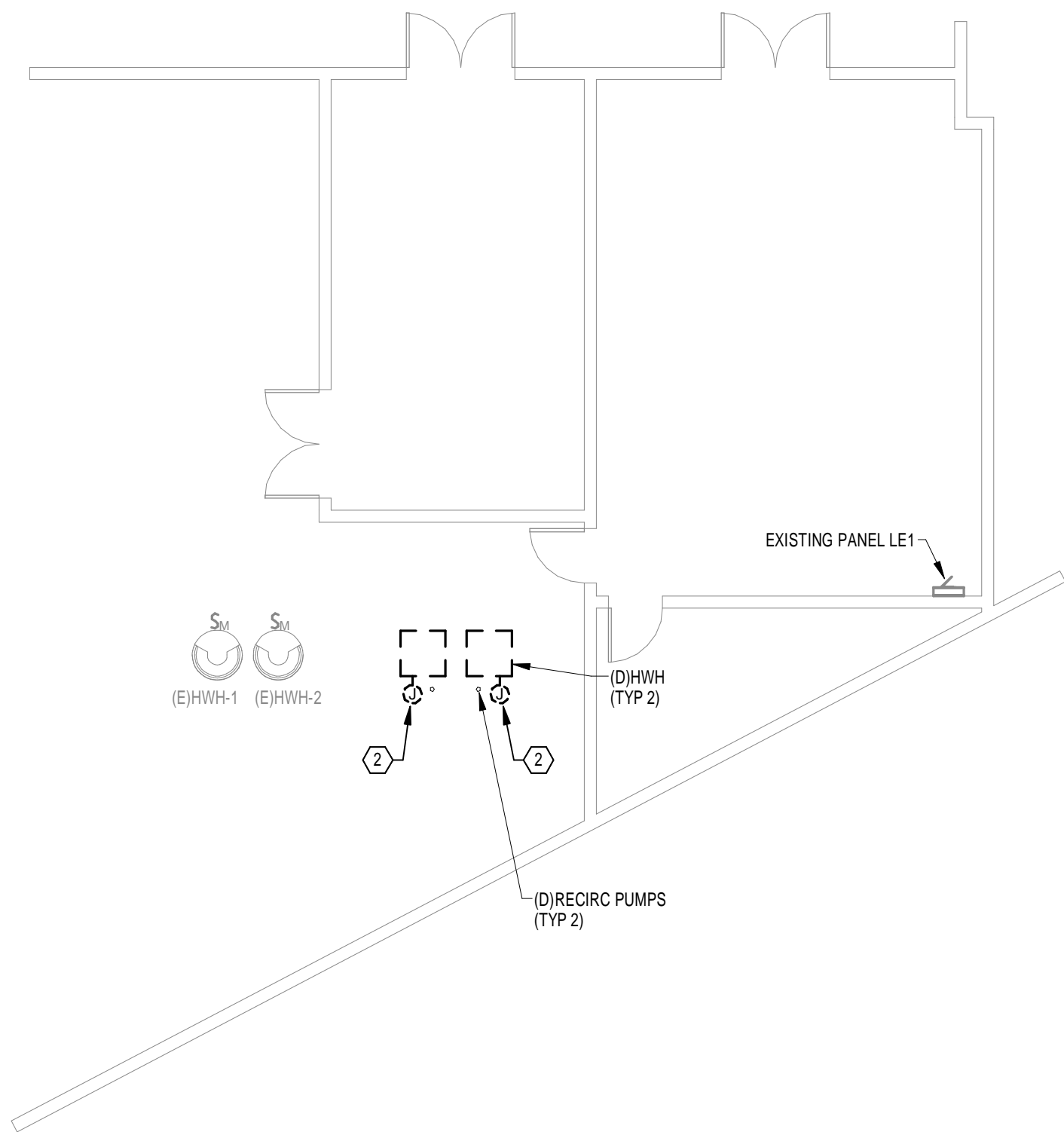
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416 WEST MAIN STREET
TAVARES, FL

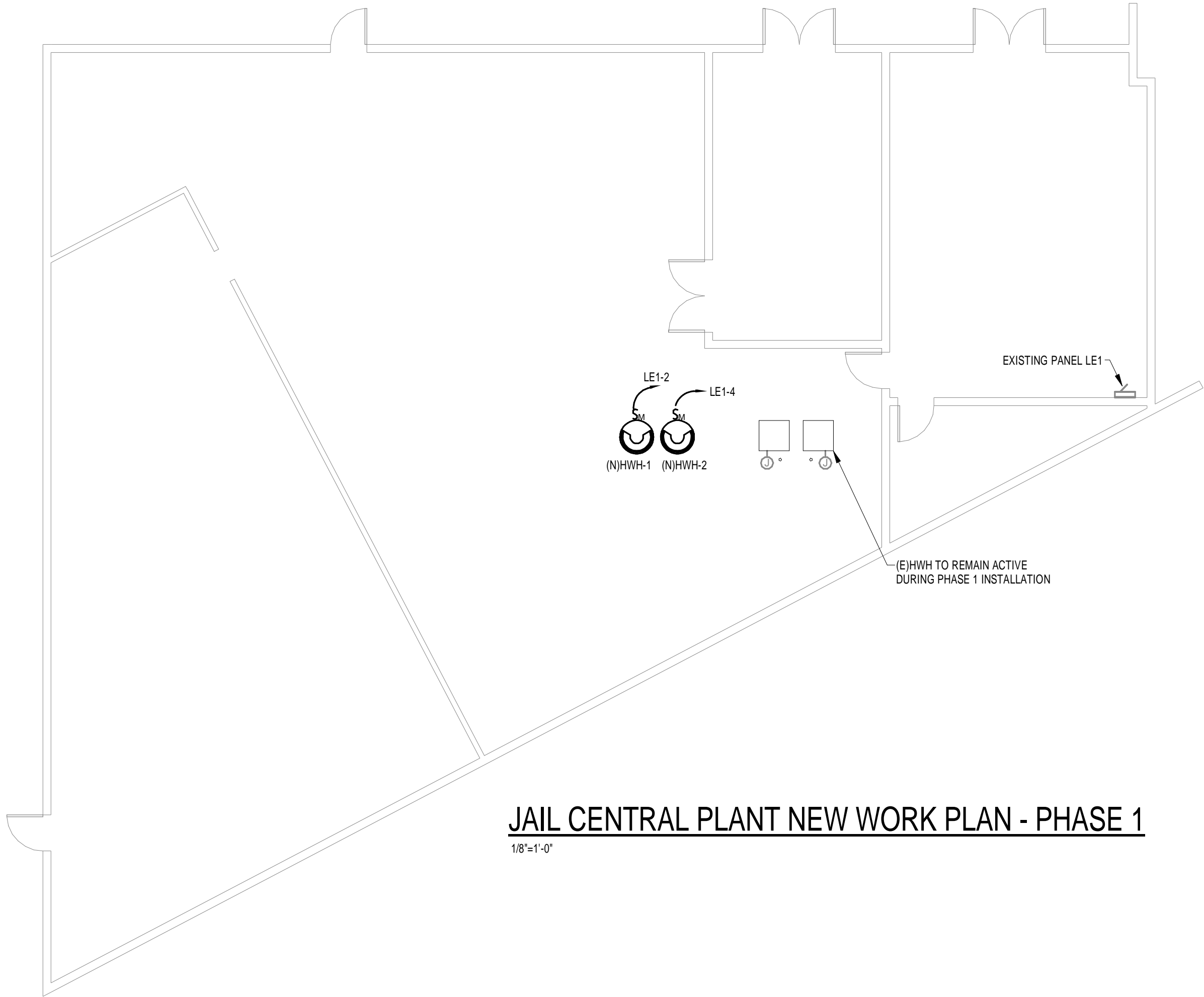
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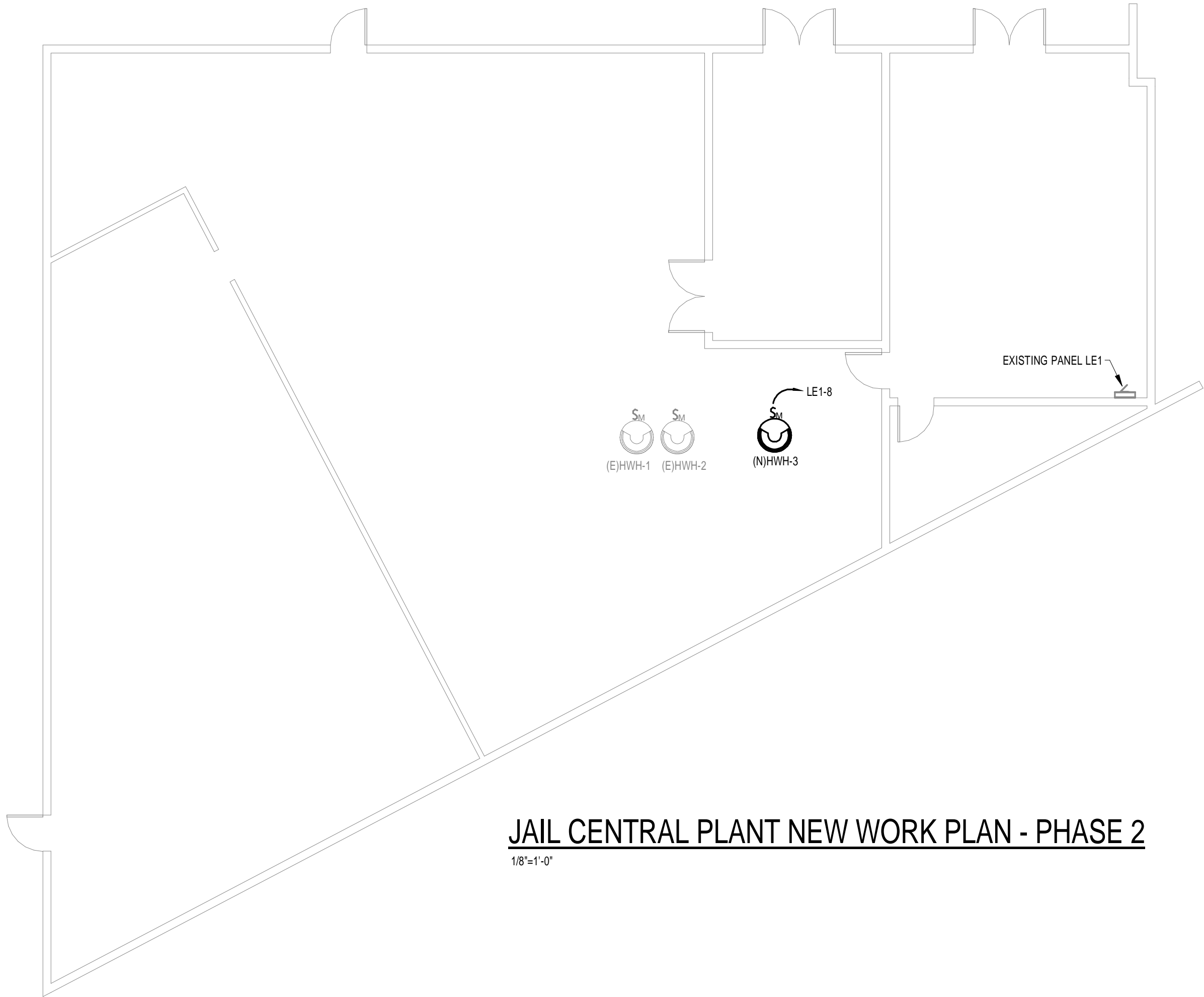
JAIL CENTRAL PLANT DEMOLITION PLAN - PHASE 1
1/8"=1'-0"



JAIL CENTRAL PLANT DEMOLITION PLAN - PHASE 2
1/8"=1'-0"



JAIL CENTRAL PLANT NEW WORK PLAN - PHASE 1
1/8"=1'-0"



JAIL CENTRAL PLANT NEW WORK PLAN - PHASE 2
1/8"=1'-0"

CODED NOTES:

- (1) EXISTING BOILER TO BE REMOVED. REMOVE EXISTING 120V CIRCUIT. REMOVE ALL OBSOLETE, UNUSED WIRE, CONDUIT, AND SUPPORTS.
- (2) EXISTING HWH AND RECIRC PUMP TO BE REMOVED. REMOVE EXISTING 120V CIRCUIT. REMOVE ALL OBSOLETE, UNUSED WIRE, CONDUIT, AND SUPPORTS.

**LAKE COUNTY JAIL CENTRAL ENERGY
PLANT DOMESTIC WATER HEATING**

416 WEST MAIN STREET
TAVARES, FL

No.	Date	Description
	04/10/14	ISSUED FOR PRICING

Seal M. Moncef Hadjij, P.E.
Florida License #48022

Project No.: 513151
Issue Date: 04-10-14
Drawn By: JNP
Approved By: MMH
Scale: 1/8" = 1'-0"

Drawing Title:
ELECTRICAL PLANS

Drawing No.:
E-2